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## SYNONYMICAL AND DESCRIPTIVE NOTES ON NORTH AMERICAN ORTHOPTERA.

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In a review of N. A. Decticinae (CAN. ENT., XXVI.), I referred (p. 180) an undescribed Pacific Coast species provisionally to *Drymadusa*, an Old World genus of which I had not then seen specimens. Direct comparison shows that it differs from that genus in the lack of a humeral sinus on the posterior border of the lateral lobes of the pronotum and in the great posterior extension of the pronotum. I propose for it the generic name *Apote* ( $\alpha$ -,  $\pi\omicron\tau\acute{\eta}$ ). The species, which may be called *A. notabilis*, is testaceous, tinged on the pronotum with olive-green, the abdomen fusco-testaceous, much and minutely marked with black and light testaceous, the tegmina abbreviate but attingent, testaceous with black veins. The length of the body is 37 mm.; of the ovipositor, 28 mm. Oregon.

We have, however, another genus of Decticinae not given in my table, consisting of long-winged species still more nearly allied to *Drymadusa*, but separable from it by the slender form, much narrower head and fastigium, narrower tegmina and the less incrassate base of the hind femora, and by the presence of spines on both sides of the under surface of the fore femora, though these are inconspicuous on the outer side of one species. It may be called *Capnobotes* ( $\kappa\alpha\pi\nu\omicron\beta\acute{o}\tau\eta\varsigma$ ) in allusion to the smoky aspect of the insects.

To this belong two species described by Thomas and referred to *Locusta*, and which I had not determined when I published my former paper. Prof. L. Bruner has kindly sent them to me, as well as two other species, one of them from Lower California. The three United States species may be separated by the following table:—

$\alpha$ .<sup>1</sup> Outer margin of fore femora distinctly spined beneath; metazona considerably elevated above the prozona, so that the pronotum is subelliptiform.

- b.*<sup>1</sup> Metazona abruptly elevated above the prozona ; anterior sulcus of pronotum very deeply impressed ; ovipositor much shorter than hind femora ; tegmina marked with pallid spots and streaks . . . . . *fuliginosus*, Thom.
- b.*<sup>2</sup> Metazona gradually elevated above the prozona ; anterior sulcus of pronotum distinct but not deep ; ovipositor longer than the hind femora ; tegmina nearly uniform in coloration . . . *Bruneri*, sp. nov.
- a.*<sup>2</sup> Outer margin of fore femora very faintly spined beneath ; metazona scarcely elevated above the prozona, and the pronotum not sub-sellate . . . . . *occidentalis*, Thom.

*Fuliginosus* was described by Thomas from a male from Arizona, and the specimen, a female, sent me by Bruner is from the same territory ; *Bruneri* comes from California and was sent me by Professor Bruner ; *occidentalis* was originally described from California, and the specimens I have seen come from Nevada and Utah. The sub-family Locustinæ to which Thomas thought these species belonged has not been recognized in the New World.

On different occasions I have received from the extreme southwestern part of the United States specimens of a large speckled Acridian belonging to a generic type of *Eremobiini* very distinct from any known and differing widely from either of the two known genera of this group found in our territory. It may be called *Tythotyle* (τυτθός, τίθη). It has a general Oedipodid aspect, not unlike *Anconia* or *Hadrotettix*. The body is not depressed, and but little compressed ; the head is normal, with rather large and prominent eyes ; the intraocular space, as seen from above, is narrower than the width of the eyes ; the vertex is carinulate ; the fastigium of the vertex sulcate, distinctly declivent, passing by a scarcely interrupted curve into the frontal costa ; the latter is not very broad, contracted and sulcate just below the ocellus, then disappearing. The antennæ are slender and shorter than the pronotum, at least in the female. The pronotum narrows rapidly from behind forward, is feebly carinulate with blunt lateral rugæ or shoulders, the lateral lobes of equal width throughout ; the metazona is a little longer than the prozona, sub-acutangulate posteriorly ; the prozona is twice cut by transverse sulci, and is a little tumid on the disk. The tegmina and wings are fully developed and much longer than the body. The hind femora are scarcely compressed, of general Oedipodid form, merely carinate above ; the inner and outer calcaria of the hind tibiæ are subequal, and the arolea minute.

I know of but one somewhat variable species, described by Bruner as *Thrinicus* (?) *maculatus*. Mr. Bruner has kindly sent me types of this for examination.

The tribe Thrinicini has not been found in America. The second species which Bruner has referred doubtfully to *Thrinicus*, viz., *T. aridus*, belongs to *Heliastus*, a genus of Oedipodini in near vicinity to the Thrinicini. The species described by Thomas under the name *Thrinicus californicus* also belongs to *Heliastus*.

Among the Oedipodini, *Mestobregma* Scudder and *Trachyrhachis* Scudder are synonymous and the former has priority.

In *Psyche* (vi. 265) I pointed out that my *Leprus ingens* from California belonged to a new generic type, for which I now propose the name *Agymnastus* (ἀγύμναστος) in allusion to its clumsy inactivity. It is most nearly allied to *Leprus* Sauss., but differs from it in its more bulky shape, due largely to the exceptional breadth of the mesosternum, its abbreviated organs of flight, which do not wholly conceal the abdomen when at rest, and the presence of a subcostal taenia reaching the base of the wings from the transverse fascia common to both genera; the posterior process of the pronotum also in rectangulate instead of rounded subacutangulate, and the intercalary vein of the tegmina is more or less obscure proximally and only a little nearer the median than the ulnar vein; the upper and lower carinæ of the hind femora, and especially the lower, are subfoliaceous.

One of the genera of our Tryxalinæ has been very much named. It was first described by me under the name *Aulocara*, males only of which were seen. Very shortly afterward I redescribed it, from the female only, as *Oedocara*. A few years ago Brunner renamed it *Coloradella*, and recently McNeill has given it the name *Eremnus*; *Aulocara* of course has priority, and the species on which it was founded proves, as Bruner has already pointed out, to be identical with Thomas's *Stawronotus Elliotti*. The genus under the name *Oedocara* was included by Saussure in the Oedipodinæ and by Brunner (as *Coloradella*) in the Tryxalinæ, an excellent illustration of the difficult definition of these two sub-families.

Some years ago, in *Psyche*, V., I attempted to show that certain genera that had been referred to Tryxalinæ should really be placed in the Oedipodinæ. I now think I was mistaken, at least as regards all the genera found in our own country, and would follow Brunner in placing them in the Tryxalinæ. It was partly owing to my statements that Mr. McNeill has rejected them from his recent Revision of the Tryxalinæ.

The generic name Beta, proposed by Brunner in 1893 for two unnamed species in his collection from Texas and Colorado, is proved by a specimen sent me by him to be the same as my *Phlibostroma* (1875). His *Pseudostauronotus*, proposed at the same time and manner, is identical, as a specimen sent me shows, with my *Stirapleura*.

#### A REMARKABLE APPEARANCE OF CATOCALA INSOLABILIS.

On Friday, June 6th, 1896, the first *Catocalas* were noticed in this locality for the season. Three *Insolabilis* were taken. The weather was hot—87° in the shade at 1 o'clock. The Saturday following was also hot, and *Catocalas* were abundant. During the forenoon twelve were taken on trees near the house. In the afternoon twenty-one more were taken on trees at some distance from the house, and in the evening, at sugar, twenty-three more were captured. Of the entire number (56) fifty were *Insolabilis*, one *Nurus*, three *Ilia*, one *Uxor*, and one *Marmorata*. Sunday the weather was still hot, and on the way to and from church *Catocalas* could be seen on nearly every tree. The wind continued southwest. On Monday the wind had changed to south-east, and the *Catocalas* were still present, but resting higher up on the trees. This being a work day, I had but little time for observation or collection. After school hours, however, a few minutes were spent in the woods, and the *Catocalas* were found hard to capture. When startled they would light high up in the trees, sometimes fully twenty feet from the ground, and some would even alight upon the leaves of the trees. At dusk *Insolabilis* came to the sugar in abundance, and thirty were taken before it was dark enough to need a lantern. In all, fifty-seven were taken on Monday, all but five being *Insolabilis*. On Tuesday the wind was north-west, and not a *Catocala* was to be seen. Not one came to sugar that evening. The only *Catocala* that was seen on Tuesday was snapped out of a tree by a scarlet Tanager and immediately torn to pieces.

I have talked with other collectors of this vicinity, and all seem to have secured a goodly share of *Insolabilis*.

In the parks and suburbs of Chicago there were literally thousands of *Insolabilis* during the three days. Previous to this remarkable flight the species was not common, so far as I have been able to ascertain.

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